

1040-01-26

Adrian Rice* (arice4@rmc.edu), Department of Mathematics, Randolph-Macon College,
Ashland, VA 23005. *What is the “birthday” of elliptic functions?*

On 23 December 1751, Euler received a copy of a paper by Count Giulio Carlo de’ Toschi di Fagnano on the lemniscate, which directly inspired the creation of Euler’s general addition theorems for elliptic integrals. After his major contributions to the subject and the subsequent development and systematization of the theory by Legendre, elliptic functions became one of the dominant areas of mathematical research during the 19th century, leading Jacobi to call 23 December 1751 “the birthday of elliptic functions”. But to what extent can the subject be said to have been born with Euler in 1751? After all, several other mathematicians, including Jacobi himself, are often credited with laying the foundations of what was to become the theory of elliptic functions, in which case its “birthday” could be anywhere from 1694 to 1829. By looking at the contributions of Euler, together with those of four other mathematicians, this talk will examine whether the subject of elliptic functions really did begin in 1751, or whether there is another date that could more accurately be described as “the birthday of elliptic functions”. (Received January 05, 2008)